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February 7, 2002

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

Re: Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems
ET Docket No. 98-153
***Ex Parte* Communication**

Dear Mr. Caton:

Pursuant to Section 1.1206(a) of the Commission's rules, I am writing on behalf of the Short Range Automotive Radar Frequency Allocation group ("SARA"), an association of automotive and automobile component manufacturers, to report an oral *ex parte* communication relating to the above-referenced proceeding. Earlier today, Jeff Krauss, a consultant to a SARA member company, telephoned John Reed in the Office of Engineering and Technology to inform him that SARA would be filing proposed rule text for an elevation angle EIRP density pattern that would apply to 24 GHz automotive short range radar sensors operating under the ultra-wideband technical rules being developed in this proceeding. The proposed rule text is being submitted as an attachment to this letter.

SARA stresses that, in the main beam, the general Part 15 emission limit of –41.25 dBm must apply. Any requirment that the power level of short range radar devices be reduced below this level will result in the detection range dropping below critical thresholds. In particular, the rear-end collision functionality would be comprised and the protection for pedestrians

would be severly degraded. In short, any additional lowering of the emission levels will deny the public the important safety benefits that short range radar devices can provide.

Please contact me if you have any questions.

Respectfully submitted,

Ari Q. Fitzgerald
Counsel for SARA

ATTACHMENT

Proposed rule language for 24 GHz automotive sensor EIRP density pattern vs. elevation angle:

For devices used as 24 GHz automotive sensors under the ultra-wideband rules, the average EIRP density in elevation angle shall comply with the following table. The vertical antenna angle is positioned at 0° for a direction parallel to ground and at –90° for the direction towards the ground. The antenna's elevation pattern envelope shall be measured within the azimuth plane of maximum EIRP. The antenna gain shall be measured with the sensor oriented in the vertical plane in the same direction that it will be installed in automobiles. EIRP_max shall have the value -41.25 dBm/MHz.

Note: The average level, as shown in the table below, shall be 3 dB below the peak envelope sidelobe level, consistent with ITU-R F1245-1.

vertical EIRP density pattern

Vertical antenna angle θ in °	spatial EIRP density gain
$\theta < -70°$ and $\theta > 40°$	EIRP_max –26.66 dB
$-70° < \theta < -30°$	EIRP_max + 2 / 3 × [dB/°](θ +30°)
$-30° < \theta < 0°$	EIRP_max
$0° < \theta < 40°$	EIRP_max – 2 / 3 × θ [dB/°]

Note: The following figure shows the relative gain at all angles; it should be interpreted as EIRP density referenced to a main beam level of -41.25 dBm/MHz.